CLAIMS

What Is Claimed Is:

1. A fluorescent lamp collection and disposal system, said fluorescent lamp containing a hazardous material comprising:

a housing having a side wall and bottom surface defining an interior area;

a cover member having a top surface, said cover member including a tube member protruding upward from said top surface for receiving a fluorescent lamp and providing access through the cover member to the interior area of the housing for the fluorescent lamp;

means for breaking the fluorescent lamp received by said tube member into a plurality of pieces and releasing a hazardous material contained by the fluorescent lamp prior to being broken;

a hose member connected at a first end to the cover member such that the hose member is in communication with the interior area of the housing;

a multi stage filtering and vacuum assembly having a plurality of filter members and a vacuum motor, said vacuum motor positioned after a final filter of the multi stage filtering and vacuum assembly, said vacuum motor creating a negative pressure vacuum within the interior of the housing;

wherein a second end of the hose member is connected to the multi-stage filtering assembly such that the hose member is in communication with a first filter member of the multi stage filtering assembly;

wherein the negative pressure vacuum created by said vacuum motor causes at least a substantial portion of the hazardous material to be drawn through the hose member and into the multi stage filtering assembly wherein at the end of filtering by the multi-stage filtering assembly substantially hazardous material free gas is exhausted out of said multi-stage filtering assembly;

wherein at least some pieces of the plurality of pieces of the broken fluorescent lamp are retained within the interior area of said housing.

2. The fluorescent lamp collection and disposal system of claim 1 wherein said tube member is positioned substantially perpendicular with the drum cover.

3. The fluorescent lamp collection and disposal system of claim 1 wherein said means for

breaking is connected to the drum cover and comprises:

a spinner assembly having one or more blades;

a motor assembly in communication with said spinner assembly; and

means for powering said motor assembly;

wherein when said fluorescent is fed through said tube member it is broken by the one or more blades of said spinner assembly.

4. The fluorescent lamp collection and disposal system of claim 1 wherein said plurality of filters include a HEPA filter and an activated carbon filter.

5. The fluorescent lamp collection and disposal system of claim 1 wherein said housing is a substantially 55 gallon drum.

6. The fluorescent lamp collection and disposal system of claim 1 wherein said hose member is substantially flexible vacuum hose.

7. The fluorescent lamp collection and disposal system of claim 1 wherein said hazardous material is a mercury vapor.

8. The fluorescent lamp collection and disposal system of claim 4 wherein said plurality of filters further includes a collection bag and a substantially non-clinging Dacron filter bag; wherein a first stage of filtering is performed by said collection bag and a last stage of filtering is performed by said activated carbon filter.

9. The fluorescent lamp collection and disposal system of claim 1 further including an extension member removably secured to the tube member of the cover member to extend the distance the fluorescent lamp travels prior to being broken by said means for breaking.

10. The fluorescent lamp collection and disposal system of claim 5 wherein said cover member is a drum lid.

11. The fluorescent lamp collection and disposal system of claim 1 wherein said cover member further including a box-like member depending upward from the top surface of the cover member, said box-like member having a bottom surface, sidewalls and a top portion, wherein said top portion is connected to said bottom surface such that the movement of the top portion to an open position moves the bottom surface to a closed position for placement within box-like member of a lamp to be crushed and the movement of the top portion to a closed position moves the bottom

surface to an open position to permit the placed lamp to enter the interior of the housing and for breakage by said means for breaking.

12. The fluorescent lamp collection and disposal system of claim 11 wherein said box-like member permitting non-linear lamps to be inserted into said housing through said cover member.

13. The fluorescent lamp collection and disposal system of claim 1 further comprising a pressure gauge in communication with the interior of said housing for reading a pressure level within said housing.

14. A fluorescent lamp collection and disposal system, said fluorescent lamp containing a hazardous material comprising:

a drum having a side wall and bottom surface defining an interior area;

a drum lid having a top surface, said cover member including a tube member protruding upward from said top surface for receiving a linear fluorescent lamp and providing access through the cover member to the interior area of the housing for the linear fluorescent lamp, said cover member further including a box-like member depending upward from the top surface of the cover member, said box-like member having a bottom surface, sidewalls and a top portion, wherein said top portion is connected to said bottom surface such that the movement of the top portion to an open position moves the bottom surface to a closed position for placement within box-like member of a non-linear lamp to be crushed and the movement of the top portion to a closed position moves the bottom surface to an open position to permit the placed non-linear lamp to enter the interior of the housing;

means for breaking a linear fluorescent lamp received by said tube member or a non-linear lamp placed within said box-like member into a plurality of pieces and releasing a previously contained mercury vapor from the linear fluorescent lamp or non-linear lamp prior to being broken;

a vacuum hose connected at a first end to the cover member such that the hose member is in communication with the interior area of the housing;

a multi stage filtering and vacuum assembly having a plurality of filter members and a vacuum motor, said vacuum motor positioned after a final filter of the multi stage filtering and vacuum assembly, said vacuum motor creating a negative pressure vacuum within the interior of the housing;

wherein a second end of the hose member is connected to the multi-stage filtering assembly such that the hose member is in communication with a first filter member of the multi stage filtering assembly;

wherein the negative pressure vacuum created by said vacuum motor causes at least a substantial portion of the mercury vapor to be drawn through the hose member and into the multi stage filtering assembly wherein at the end of filtering by the multi-stage filtering assembly substantially mercury vapor free gas is exhausted out of said multi-stage filtering assembly;

wherein at least some pieces of the plurality of pieces of the broken linear fluorescent lamp or non-linear lamp are retained within the interior area of said housing.

15. The fluorescent lamp collection and disposal system of claim 14 wherein said means for breaking is connected to the drum cover and comprises:

a spinner assembly having one or more blades;

a motor assembly in communication with said spinner assembly; and

means for powering said motor assembly;

wherein when said fluorescent is fed through said tube member it is broken by the one or more blades of said spinner assembly.

16. The fluorescent lamp collection and disposal system of claim 14 wherein said plurality of filters include a HEPA filter and an activated carbon filter.

17. The fluorescent lamp collection and disposal system of claim 14 wherein said drum is a substantially 55 gallon drum.

18. The fluorescent lamp collection and disposal system of claim 16 wherein said plurality of filters further includes a collection bag and a substantially non-clinging Dacron filter bag; wherein a first stage of filtering is performed by said collection bag and a last stage of filtering is performed by said activated carbon filter.

19. The fluorescent lamp collection and disposal system of claim 14 further including an extension member removably secured to the tube member of the cover member to extend the distance the fluorescent lamp travels prior to being broken by said means for breaking.

20. The fluorescent lamp collection and disposal system of claim 14 further comprising a pressure gauge in communication with the interior of said housing for reading a pressure level

within said housing.

21. A method for collecting and disposing of fluorescent lamps containing at least one hazardous material, said method comprising the steps of:

(a) inserting a fluorescent lamp into a receiving member;

(b) breaking the inserted fluorescent lamp into a plurality of pieces and releasing the contained at least one hazardous material;

(c) collection the at least some of the plurality of pieces within an interior area of a housing;

(d) capturing a substantial portion of the released at least one hazardous material through a multi-stage filtering assembly; and

(e) retaining the captured at least one hazardous material.

22. The method of claim 21 wherein steps (a) and (b) including the steps of inserting the fluorescent lamp through a tube member associated with a cover member and to a spinner assembly which breaks the fluorescent lamp into a plurality of pieces and releases the at least one hazardous material.